

CLAIMS:

1. A livestock sorter comprising:

side walls defining a confining container for an animal to be sorted;

5 a base plate on which the animal stands when confined in the container;

a weighing scale supporting the base plate for obtaining a weight of the animal when confined as it stands on the base plate;

a front gate at the front of the container moveable from an open position allowing passage of the animal to a closed position for preventing forward
10 movement of the animal while it is being weighed;

a rear gate at the rear of the container moveable from an open position allowing passage of the animal to a closed position for preventing rearward movement of the animal while it is being weighed;

the front gate comprising a left side vertical gate panel and a right side
15 vertical gate panel;

each of the gate panels being pivotal about a vertical axis at an outer edge of the gate panel from the closed position extending across the container generally at right angles to a mid line toward the mid line through an angle of the order of 90 degrees to an open position generally parallel to the mid line;

20 and front and a rear drive construction for effecting movement of the front and rear gates respectively between the open and closed positions, each drive construction comprising:

a left lever connected to the left gate panel and arranged such that pivotal movement of the left lever about the axis of the left gate panel causes said pivotal movement of the left gate panel;

a right lever connected to the right gate panel and arranged
5 such that pivotal movement of the right lever about the axis of the right gate panel causes said pivotal movement of the right gate panel;

an actuating member movable along the midline of the container in response to an actuating force from a drive member;

a left link pivotally connected to the actuating member and to
10 the left lever;

a right link pivotally connected to the actuating member and to the right lever;

the actuating member, the links and the levers being arranged such that movement of the actuating member to a first position along the mid line
15 causes the actuating member to provide a force on the levers through the links to pivot the gate panels to the open position and such that movement of the actuating member to a second position along the mid line causes the actuating member to provide a force on the levers through the links to pivot the gate panels to the closed position;

20 the actuating member, the links and the levers being arranged such that, in the second position with the gate panels in the closed position, force from the animal on the gate panels tending to open the gate panels provides

substantially no force through the links and the actuating member to the drive member.

2. The livestock sorter according to Claim 1 wherein the links and the actuation member are arranged in an overcenter position in the closed position
5 of the gate panels.

3. The livestock sorter according to Claim 1 wherein the links are arranged substantially at right angles to the mid line when the gate panels are in the closed position.

4. The livestock sorter according to Claim 3 wherein the links are
10 moved to a position slightly beyond a right angle to the mid line so as to be overcenter when the gate panels are in the closed position.

5. The livestock sorter according to Claim 1 wherein the actuating member defines two pivot points each for a respective one of the links wherein the two pivot points are located symmetrically one each side of the mid line.

6. The livestock sorter according to Claim 5 wherein the actuating
15 member comprises a transverse bar at right angles to the mid line with the two pivot points located symmetrically one at each end of the bar.

7. The livestock sorter according to Claim 1 wherein there is provided a slide guide for guiding movement of the actuating member along the mid
20 line.

8. The livestock sorter according to Claim 7 wherein the actuating member includes a plastic slide block which slides along the slide guide.

9. The livestock sorter according to Claim 8 wherein the slide guide comprises a pair of C-channels facing inwardly toward the mid line and each receiving a side portion of the slide block.

10. The livestock sorter according to Claim 7 wherein the slide guide provides an end stop for locating the actuating member in an overcenter position when the gate panels are in the closed position.

11. The livestock sorter according to Claim 1 wherein the drive member comprises a cylinder and piston mounted on the center line.

12. The livestock sorter according to Claim 1 wherein the front gate panels open from the closed position forwardly and the rear gate panels open from the closed position rearwardly.